Feeding Habits of Bufo Marinus

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Toads were abundant as usual in my fish pond in Kaimuki, giving me an opportunity to observe their feeding habits. During five weeks, following March 1st, 1940, I examined several of their stools each day—a total of 53 in all. We all know that toads will grab anything that moves. I was surprised, however, to find that their principal food in this location is the burrowing roach, *Pycnocelus surinamensis* (Linn.). These run from 40% to as high as 90% of the entire contents. At the start, the Chinese rose beetle (*Adoretus sinicus* Burm.) was on the wing, and some stools ran as high as 40 to 50% of their remains. Later, these fell off rapidly, with only 2 or 3 beetles per stool. This method gives a fine indicator of abundance on the wing.

I was interested to see how far Pheidole ants (*Pheidole megacephala*) were eaten. Most stools contained none, but following rainy nights when the ants threw up soil on the lawn, the toads fed upon them. In such rare instances, comprising about 10 to 20% of their castings. Stools containing ants contain much soil and mud, taken in with these tiny insects.

Toads swallow considerable plant trash, bits of leaves, grass clippings, etc., when grabbing the insects. Other insects found were in small numbers: grain beetles (*Tenebrionidae*), black grass bugs (*Geotomus pygmaeus*), black wasp (*Odynerus* ?), Fuller's rose beetle (*Pantomorus godmani* [Crotch]), one honey bee, and one large caterpillar (*Herse cingulata* [Fab.]).

Records should be taken in other locations to note variations. Also at various seasons. This indicates that the toads are destined to be an important check upon the burrowing roach, which has an important bearing in the tropics, as it is the intermediate host of the eye worm of chickens.